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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,182	04/29/2005	Masahiko Tada	05143/HG	9981

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EXAMINER
SAVAGE, JASON L

ART UNIT	PAPER NUMBER
1775	

DATE MAILED: 07/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/527,182

Applicant(s)

TADA ET AL.

Examiner

Jason L. Savage

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 2, 8-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20050307</u> . | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

Applicant's election without traverse of Group I, claims 1 and 3-7 in the reply filed on 5-9-06 is acknowledged.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-5 and 7 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Masahiko et al (JP 2001-303226 English Machine Translation).

Masahiko teaches a galvanized steel sheet having a coated film with excellent adhesion (abstract). Masahiko further teaches that the steel sheet contains 0.05-0.20% C, 0.02-1.50% Si, 0.10% or less of P, 0.50-3.0% Mn, 0.007-0.25% Ti and 0.005-0.25% Nb (Detailed Description: par [0026]). Masahiko further teaches that at the interface between the galvanized layer and the base steel a phase comprising needlelike

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irregularities is formed (Detailed Description: par [0017] and Figure 1). Masahiko is silent to the depth, pitch and length of the irregularities.

However, as is disclosed by Applicant in the instant specification in the first full paragraph on page 20 and last paragraph on page 21, Si in the steel allows the formation of a continuous irregular portion at the interface and that when the concentration of C + P is less than or equal to the concentration of Si, the irregular portions are easily formed. Masahiko exemplifies multiple embodiments wherein the Si content is greater than the C + P content (See Table 1, Examples A-B, D, F-H, J-K, M-N, P-S, V). As such, one would expect the needlelike irregularities of Masahiko to have the depth, pitch and length as those claimed by Applicant. The Patent and Trademark Office can require Applicant to prove that prior art products do not necessarily or inherently possess characteristics of claimed products where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes; burden of proof is on Applicants where rejection based on inherency under 35 U.S.C. § 102 or on prima facie obviousness under 35 U.S.C. § 103, jointly or alternatively, and Patent and Trademark Office's inability to manufacture products or to obtain and compare prior art products evidences fairness of this rejection, *In re Best, Bolton, and Shaw*, 195 U.S.P.Q. 431 (CCPA 1977). In the alternative, forming a coated sheet having the irregular portions having the claimed structure would have been obvious.

Regarding claim 3, Masahiko exemplifies multiple embodiments having the claimed steel composition (Examples A-B, D, F-H, J, M-N, Q-S, V).

Regarding claims 4-5, Masahiko teaches that the steel sheet is heat treated to oxidize the surface of the steel sheet (Detailed Description: par[0047]). Although Masahiko recites that the oxide formed is iron oxide, it is the position of the Examiner that silicon oxide would formed immediately below the steel surface such as is claimed since Masahiko teaches a similar same steel alloy to that claimed by Applicant.

Regarding claim 7, Masahiko exemplifies multiple embodiments having the claimed Ti, Nb and V concentrations in the steel composition (Examples A-B, D, F-H, J, M-N, Q-S, V).

Claims 1 and 3-7 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yoshitsugu et al (JP 2000-290730 English Machine Translation).

Yoshitsugu teaches a galvanized steel sheet having a coated film with excellent adhesion strength (abstract). Yoshitsugu further teaches that the steel sheet contains 0.05-0.25% C, 2.00% or less Si, 1.00-2.5% Mn, 0.005 to 0.10% Al (Abstract - Solution). Yoshitsugu also teaches the contents of the added elements are desirably 0.08-0.15 wt% C, 0.5-1.0 wt% Si, 0.015 wt% or less P, 1.5-2.0 wt% Mn, 0.010 wt% or less S, 0.01-0.05 wt% Al, 0.005-0.10 wt% Nb, 0.01-0.20 wt% Ti (Detailed Description: par [0028-0035]). Yoshitsugu content is silent to the formation of irregular portions or the depth, pitch and length of the irregularities.

However, as was set forth in the rejection above, the concentration of Si and the concentration of C + P being less than or equal to the concentration of Si is what controls the irregular portion formation. Since Yoshitsugu teaches the same steel alloy

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including exemplifying multiple embodiments having the claimed Si concentration in comparison to C+ P, the irregular portions having the claimed structure would have been inherently formed (See Tables 1 and 2, Examples 1-25). The Patent and Trademark Office can require Applicant to prove that prior art products do not necessarily or inherently possess characteristics of claimed products where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes; burden of proof is on Applicants where rejection based on inherency under 35 U.S.C. § 102 or on prima facie obviousness under 35 U.S.C. § 103, jointly or alternatively, and Patent and Trademark Office's inability to manufacture products or to obtain and compare prior art products evidences fairness of this rejection, *In re Best, Bolton, and Shaw*, 195 U.S.P.Q. 431 (CCPA 1977). In the alternative, forming a coated sheet having the irregular portions having the claimed structure would have been obvious.

Regarding claims 3 and 6-7, Yoshitsugu teaches exemplifies multiple embodiments having the claimed steel composition (Examples 1-22 and 24-25).


Regarding claims 4-5, Yoshitsugu teaches that the steel sheet is heat treated to form an internal oxidation layer at the surface of the steel sheet which includes oxides of silicon (Detailed Description: par[0017-0018]).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason L. Savage whose telephone number is 571-272-1542. The examiner can normally be reached on M-F 6:30-4:00.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jason Savage
7-21-06



JOHN J. ZIMMERMAN
PRIMARY EXAMINER